

Utah's Vital Statistics: Quarterly Report

Second Quarter 2004



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Mission Statement

The Office of Vital Records and Statistics administers the statewide system of Vital Records and Statistics by documenting and certifying the facts of births, deaths, and family formation for the legal purposes of the citizens of Utah, participates in the National Vital Statistics System, and responds to the needs of health programs, health care providers, businesses, researchers, educational institutions and the Utah public for data and statistical information.

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Table 1. Births, deaths, infant deaths and population by health district: Utah, second quarter 2004

Health district County	Population Number	Births		Deaths		Infant deaths	
		2nd Qtr Number	YTD Number	2nd Qtr Number	YTD Number	2nd Qtr Number	YTD Number
Total	2,338,762	13,362	25,681	3,266	6,664	76	123
Bear River	141,322	870	1,641	199	362	3	4
Box Elder	43,812	179	362	77	149	1	1
Cache	95,460	681	1,261	121	209	2	3
Rich	2,050	10	18	1	4	0	0
Central Utah	67,673	317	607	157	291	6	8
Juab	8,643	57	102	17	33	3	3
Millard	12,335	40	82	31	64	2	3
Piute	1,409	5	15	8	11	0	0
Sanpete	23,550	117	211	55	94	1	2
Sevier	19,232	92	180	43	82	0	0
Wayne	2,504	6	17	3	7	0	0
Davis	250,265	1,508	2,871	283	593	5	10
Salt Lake	927,564	4,869	9,400	1,274	2,648	28	46
Southeastern	53,082	194	396	88	190	2	2
Carbon	19,858	94	184	42	104	0	0
Emery	10,540	45	84	18	39	1	1
Grand	8,468	21	43	11	19	0	0
San Juan	14,216	34	85	17	28	1	1
Southwest	152,960	873	1,707	289	576	4	11
Beaver	6,285	33	64	18	29	0	0
Garfield	4,599	15	28	7	21	0	0
Iron	35,507	214	425	43	88	1	4
Kane	5,958	21	39	14	29	0	1
Washington	100,611	590	1,151	207	409	3	6
Summit	32,236	158	294	23	45	0	0
Tooele	46,208	268	542	77	141	2	5
Tri-County	41,756	213	426	76	162	1	3
Daggett	916	2	3	0	0	0	0
Duchesne	14,856	64	129	28	57	1	1
Uintah	25,984	147	294	48	105	0	2
Utah County	398,056	2,988	5,618	423	890	20	26
Wasatch	16,847	101	187	27	50	0	0
Weber-Morgan	210,793	1,003	1,992	350	716	5	8
Morgan	7,416	23	55	8	18	2	2
Weber	203,377	980	1,937	342	698	3	6

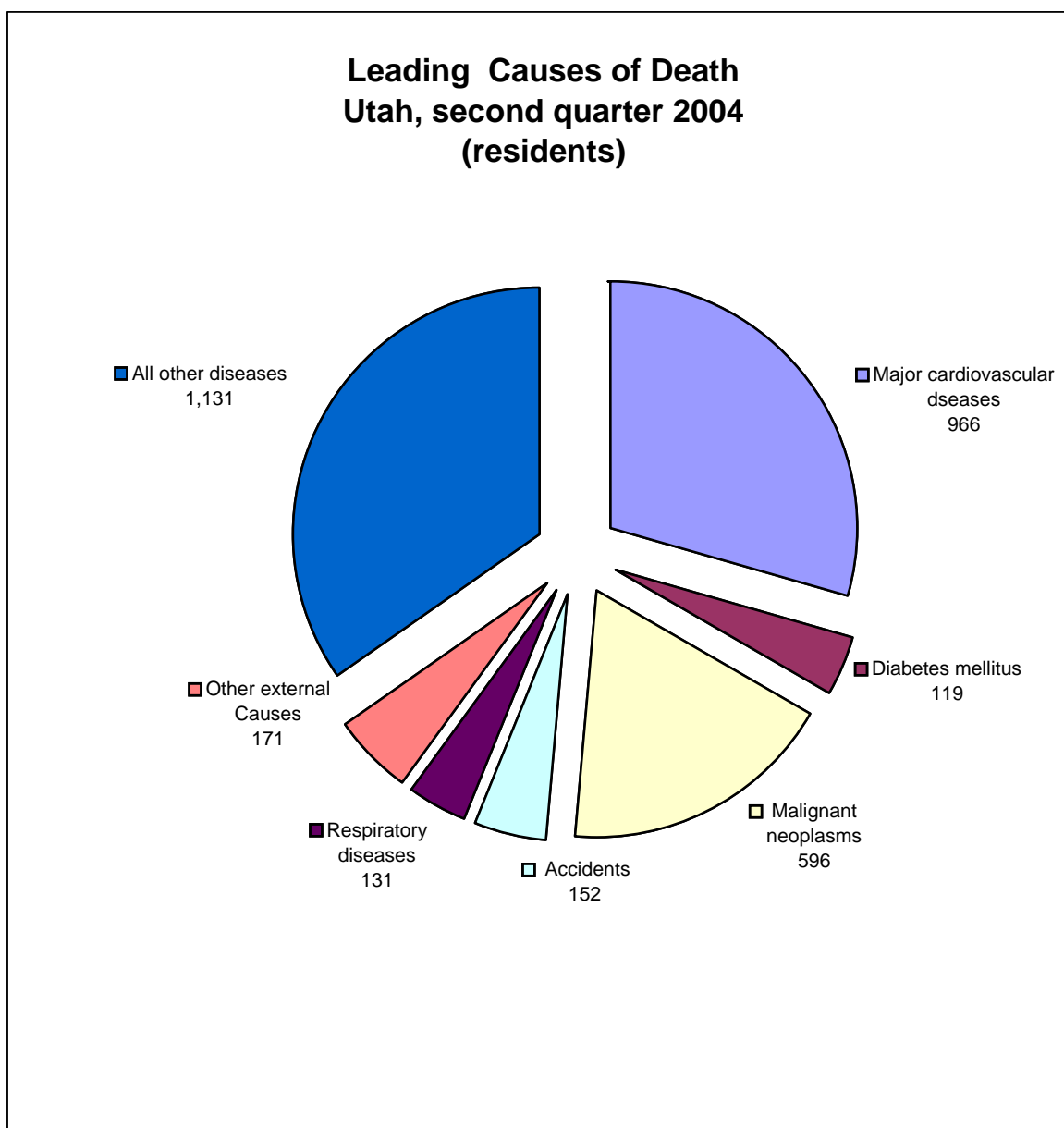
Table 2. Births, c-sections, gestation under 37 weeks, mothers under 20 years of age, and low birthweight by county of residence: Utah, second quarter 2004

Health district County	Births		C-sections		Gestation under 37 weeks		Mothers under 20 years of age		Low birth weight	
	2nd Qtr Number	YTD Number	2nd Qtr Number	YTD Number	2nd Qtr Number	YTD Number	2nd Qtr Number	YTD Number	2nd Qtr Number	YTD Number
Total	13,362	25,681	2,738	5,243	1,260	2,476	784	1,570	834	1,641
Bear River	870	1,641	153	292	68	153	50	88	38	88
Box Elder	179	362	34	71	13	34	11	27	10	22
Cache	681	1,261	118	218	55	116	39	61	28	65
Rich	10	18	1	3	0	3	0	0	0	1
Central Utah	317	607	79	149	44	74	19	44	32	57
Juab	57	102	14	25	9	14	1	4	8	10
Millard	40	82	6	16	4	11	2	8	2	6
Piute	5	15	1	4	0	2	0	0	0	3
Sanpete	117	211	37	64	20	28	10	19	15	22
Sevier	92	180	20	36	10	17	6	13	7	14
Wayne	6	17	1	4	1	2	0	0	0	2
Davis	1,508	2,871	301	575	152	303	75	136	89	183
Salt Lake	4,869	9,400	1,084	1,992	467	903	320	640	335	649
Southeastern	194	396	59	108	19	46	20	45	13	29
Carbon	94	184	25	52	14	33	13	21	10	19
Emery	45	84	14	17	4	7	1	8	2	3
Grand	21	43	8	16	0	1	4	6	0	0
San Juan	34	85	12	23	1	5	2	10	1	7
Southwest	873	1,707	137	275	78	156	55	117	42	92
Beaver	33	64	6	14	3	5	1	4	0	1
Garfield	15	28	3	6	2	5	0	0	0	2
Iron	214	425	32	65	18	36	16	31	13	25
Kane	21	39	3	7	2	4	1	5	0	3
Washington	590	1,151	93	183	53	106	37	77	29	61
Summit	158	294	41	85	17	34	2	12	12	30
Tooele	268	542	56	112	36	63	27	49	21	35
Tri-County	213	426	54	110	22	51	22	53	12	31
Daggett	2	3	0	0	1	1	0	0	0	0
Duchesne	64	129	16	32	7	14	4	11	1	6
Uintah	147	294	38	78	14	36	18	42	11	25
Utah County	2,988	5,618	513	1,028	229	441	95	195	152	289
Wasatch	101	187	23	43	6	15	5	9	4	6
Weber-Morgan	1,003	1,992	238	474	122	237	94	182	84	152
Morgan	23	55	2	8	5	9	1	2	4	4
Weber	980	1,937	236	466	117	228	93	180	80	148

Table 3. Deaths due to unnatural causes by county of residence: Utah, second quarter 2004

Health district County	Deaths		Total		Motor Vehicle		Other accidents		Homocide		Suicide		Undetermined	
	2nd Qtr Number	YTD Number	2nd Qtr Number	YTD Number	2nd Qtr Number	YTD Number	2nd Qtr Number	YTD Number	2nd Qtr Number	YTD Number	2nd Qtr Number	YTD Number	2nd Qtr Number	YTD Number
Total	3,266	6,664	323	619	65	119	87	177	9	18	88	174	74	132
Bear River	199	362	21	41	4	10	5	12	0	0	4	9	8	10
Box Elder	77	149	7	15	3	7	0	2	0	0	1	3	3	3
Cache	121	209	14	26	1	3	5	10	0	0	3	6	5	7
Rich	1	4	0	0	0	0	0	0	0	0	0	0	0	0
Central Utah	157	291	9	24	0	4	2	8	1	1	3	8	3	4
Juab	17	33	0	0	0	0	0	1	0	0	0	0	0	0
Millard	31	64	4	7	0	0	0	2	1	1	2	3	1	1
Piute	8	11	0	0	0	0	0	0	0	0	0	0	0	0
Sanpete	55	94	3	11	0	2	0	2	0	0	1	5	2	2
Sevier	43	82	2	6	0	2	2	3	0	0	0	0	0	1
Wayne	3	7	0	0	0	0	0	0	0	0	0	0	0	0
Davis	283	593	29	53	4	5	9	16	1	1	9	19	6	12
Salt Lake	1,274	2,648	123	238	20	39	31	64	4	9	38	69	30	57
Southeastern	88	190	9	16	2	3	3	6	1	1	2	2	1	4
Carbon	42	104	3	5	1	1	0	0	1	1	0	0	1	3
Emery	18	39	2	6	0	1	2	4	0	0	0	0	0	1
Grand	11	19	1	2	0	0	0	1	0	0	1	1	0	0
San Juan	17	28	3	3	1	1	1	1	0	0	1	1	0	0
Southwest	289	576	22	43	7	13	6	10	1	2	6	12	2	6
Beaver	18	29	2	2	1	1	0	0	0	0	1	1	0	0
Garfield	7	21	0	0	0	0	0	0	0	0	0	0	0	0
Iron	43	88	8	11	1	3	1	1	1	2	4	4	1	1
Kane	14	29	0	3	0	1	0	0	0	0	0	0	0	2
Washington	207	409	12	27	5	8	5	9	0	0	1	7	1	3
Summit	23	45	3	7	0	0	2	4	0	0	1	2	0	1
Tooele	77	141	17	22	10	11	1	2	0	0	2	2	4	7
Tri-County	76	162	14	25	6	8	5	10	0	0	1	5	2	2
Daggett	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Duchesne	28	57	3	6	1	3	1	2	0	0	0	0	1	1
Uintah	48	105	11	19	5	5	4	8	0	0	1	5	1	1
Utah	423	890	36	84	8	17	13	28	0	2	10	24	5	13
Wasatch	27	50	3	6	1	2	0	0	0	0	2	4	0	0
Weber-Morgan	350	716	37	60	3	7	10	17	1	2	10	18	13	16
Morgan	8	18	1	3	1	2	0	0	0	0	0	1	0	0
Weber	342	698	36	57	2	5	10	17	1	2	10	17	13	16

Figure 1



Utah Vital Statistics: A Historical Review

Utah Vital Statistics: A Historical Review presents an overview of selected public health trends in Utah using data derived from Utah birth and death certificates. These data may be available for approved research projects. For more information or to request data, please contact the Utah Office of Vital Records and Statistics.

Birth Defects, 2003

Birth defects are abnormal conditions that happen before or at the time of birth. The March of Dimes defines a birth defect as an abnormality of structure, function, or metabolism (body chemistry) present at birth. They can result in physical or mental disability, cause severe medical problems and sometimes are fatal. According to the March of Dimes, several thousand different birth defects have been identified.

Birth defects can be caused by chromosomal abnormalities, genetic disorders, and environmental insults. However, the causes of about 70 percent of all birth defects are unknown. Known causes of birth defects include abnormalities in the number or structure of chromosomes, a faulty gene passed from one or both parents and environmental insults such as drug or alcohol abuse, infections or exposure to certain medications or other chemicals. Some of the birth defects with unknown causes appear to be multi factional, caused by a combination of one or more genes and environmental insults.

Birth defects are a serious problem. Nationally, birth defects are the leading cause of death in the first year of life. Birth defects are the fifth-leading cause of years of potential life lost, contribute substantially to childhood morbidity and are a major cause of childhood and long-term disability. Millions of dollars are spent every year for the care and treatment of children with birth defects and often require lifelong medical treatment.

Health care professionals use epidemiologic methods to learn more about the causes of birth defects. Epidemiology is the study of the distribution and causes of diseases and health outcomes in the human population. The goal of birth defects epidemiology is to describe the frequency and pattern of the occurrence of birth defects, identify causes that may explain the occurrence of birth defects, and ultimately prevent or reduce the occurrence of birth defects.

For each birth in Utah, information on birth defects is collected, processed and used by the state to assess public health risk. The data are also sent to the National Center for Health Statistics. Table 1 lists the birth defects reported along with the abbreviations used in the graphs for this report.

Table 1

Number on Birth Worksheet	Birth Defects	Abbreviation for Graphs
01	Anencephalus	Anenceph
02	Spina Bifida/Meningocele	Spina Bifida
03	Hydrocephalus	Hydroceph
04	Microcephalus	Microceph
05	Other Central Nervous System	Other CNS
06	Heart Malformations	Heart Malf
07	Other Circulatory Anaomalies	Other Circ
08	Respiratory Anomalies	Resp
09	Rectal Atresia	Rectal
10	Tracheo-Esophageal Fistula/Esophageal Atresia	TEFEA
11	Omphalocele/Gastroschisis	Omphal
12	Other Gastrointestinal	Other GI
13	Malformed Genitalia	Malf Gen
14	Renal Angenesis	Renal
15	Other Urogenital Anomalies	Other UA
16	Cleft Lip/Palate	Cleft Lip
17	Polydactyly/Syndactyly/Adactyly	PSA
18	Club Foot	Club Foot
19	Diaphragmatic Hernia	DH
20	Other Musculoskeletal/Integumental Anomalies	Other MIA
21	Down's Syndrome	Downs
22	Other Chromosomal Anomalies	Other CA
23	Multiple Anomalies	Mult Anom
00	None	None
24	Other	Other
25	Unknown	Unknown

Birth defects can sometimes be underreported or misreported on birth certificates. Many birth defects are hard to detect at birth, limiting complete and accurate reporting. Information on premature infants admitted to newborn intensive care units is sometimes difficult to gather. Other possible reasons for inaccurate reporting may include inadequate examination of newborns or the birth defect is noted on the medical record but not coded. The legal requirements of prompt birth certificate filing make it difficult to add information from examinations done after the infant is taken to the nursery.

Some conditions are often reported as false positives on the birth certificate. These are conditions that usually resolve themselves and are not true birth defects. For example, undescended testis will be coded as malformed genitalia and heart murmurs that do not represent structural abnormalities of the heart are coded as a birth defect.

Caution should be used in comparing rates for a specific birth defect. A small change in the number of birth defects reported can result in a relatively large change in rates. This report focuses only on birth defects reported on birth certificates at the time of birth for children born in 2003.

Figure 1 shows Utah birth defects from 2003 as reported to Vital Statistics. One in 33 babies in the United States is born with a birth defect. In 2003, 1167 babies, 1 in 42 births, were born with birth defects in Utah.

Figure 1

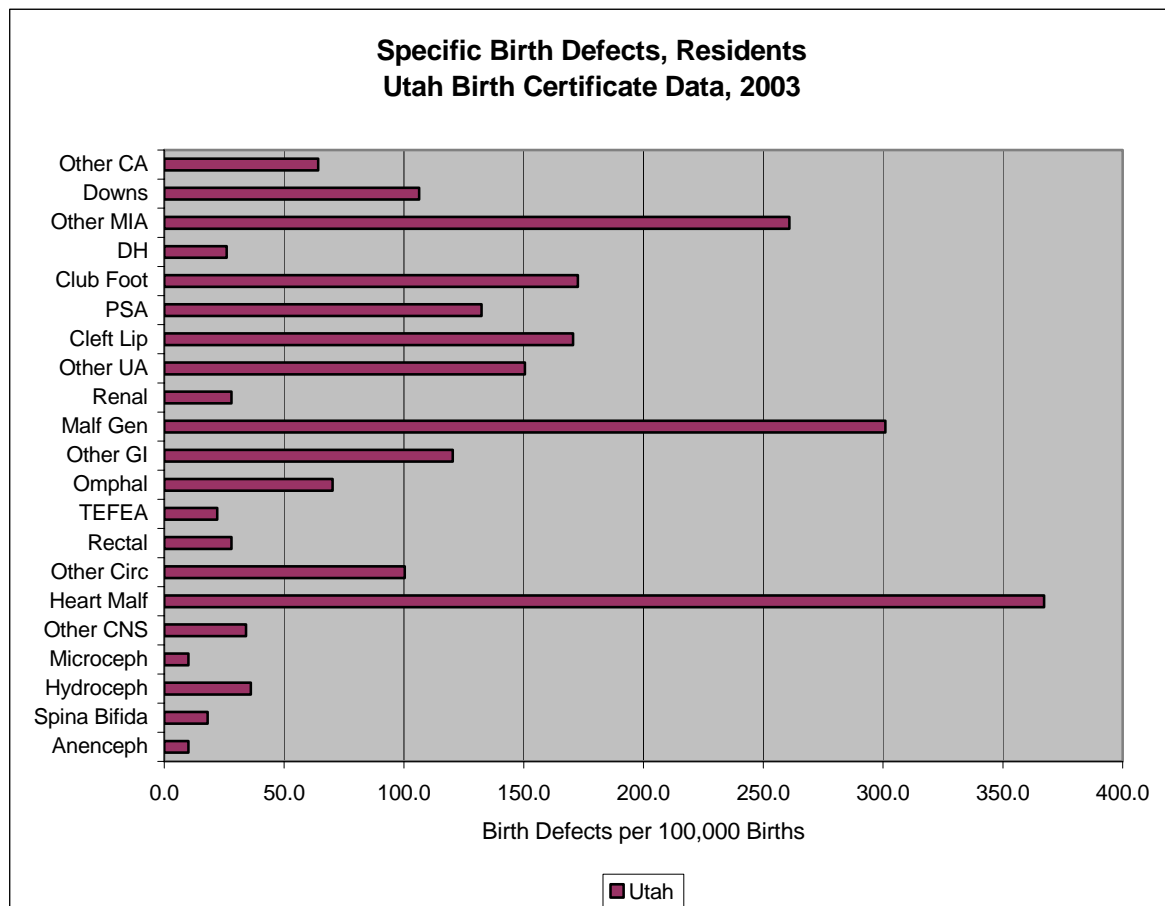


Figure 2 shows that males are more likely to have birth defects than females. Vital Records data in 2003 report that 768 males compared to 448 females had birth anomalies. Defects of the heart and malformed genitalia are the most common kinds of birth defects reported in Utah birth certificate data. Data for these two birth defects can be elevated due to misreporting.

Figure 2

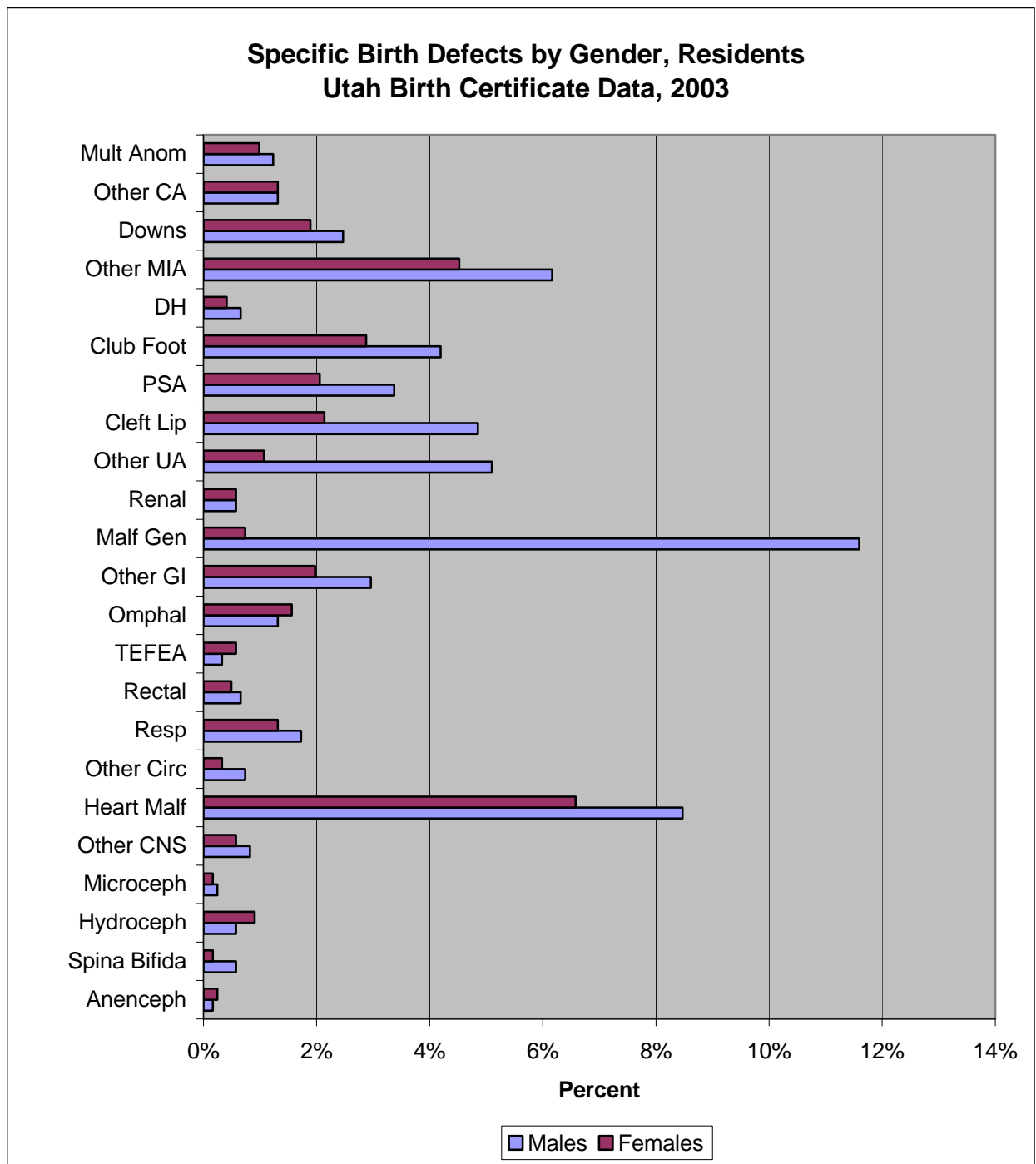


Figure 3

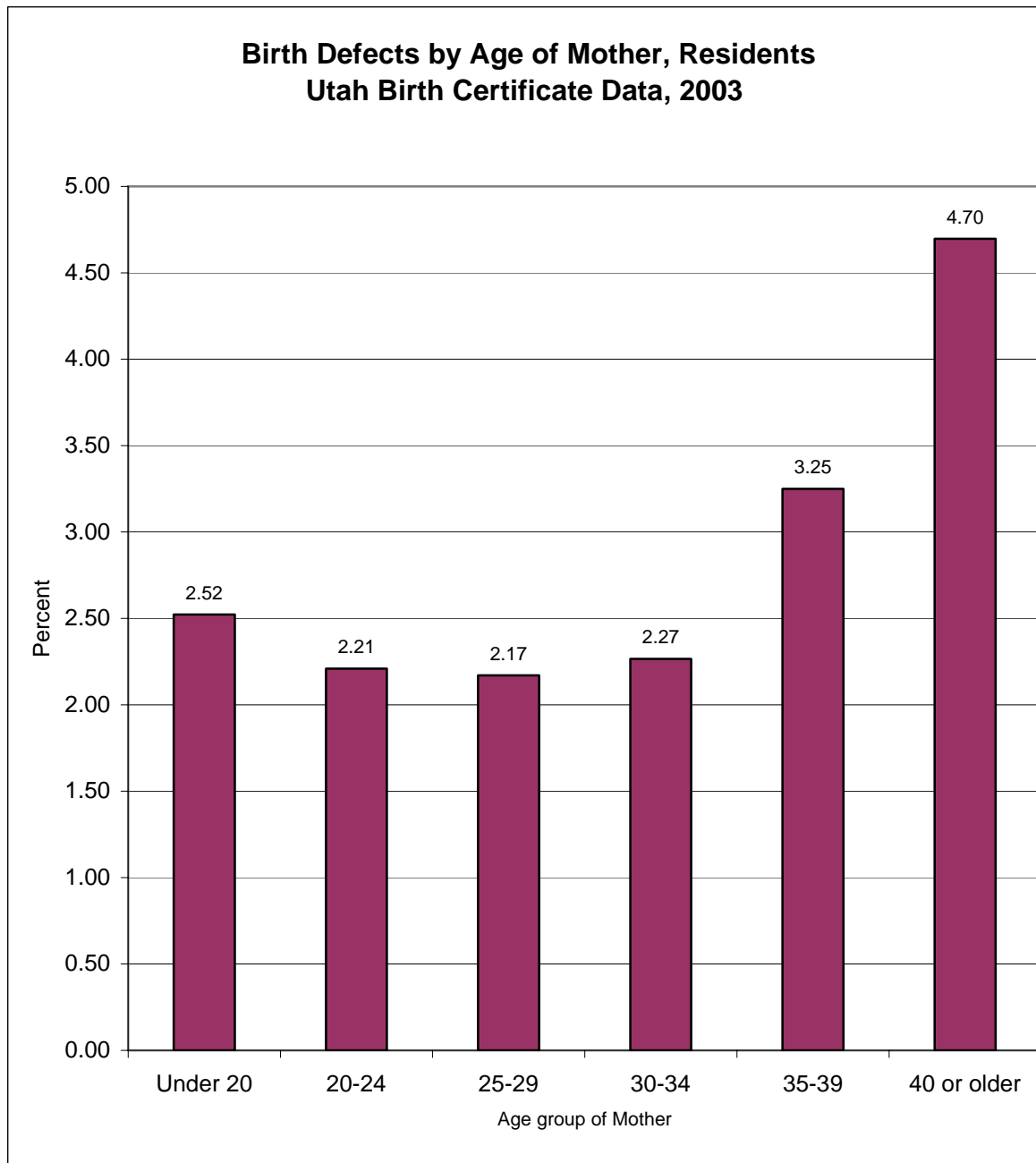


Figure 3 shows that maternal age affects birth outcomes. Mothers under the age of 20 and over the age of 35 are more likely to deliver a child with a birth defect. Rates for certain birth defects differ widely with maternal age. Birth defects that occur at an older maternal age are more likely to be due to chromosomal abnormalities. Rates for Down's syndrome are highest for infants of mothers over 40 years of age. Rates for Gastroschisis are highest for infants of mothers under age 20 years. Figure 4 – Figure 7 show the affect of age on the anomalies collected by Vital Records.

Figure 4

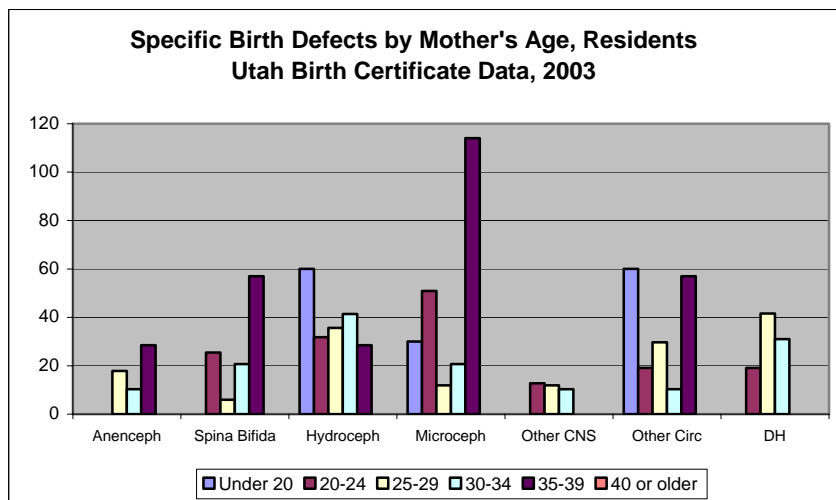


Figure 5

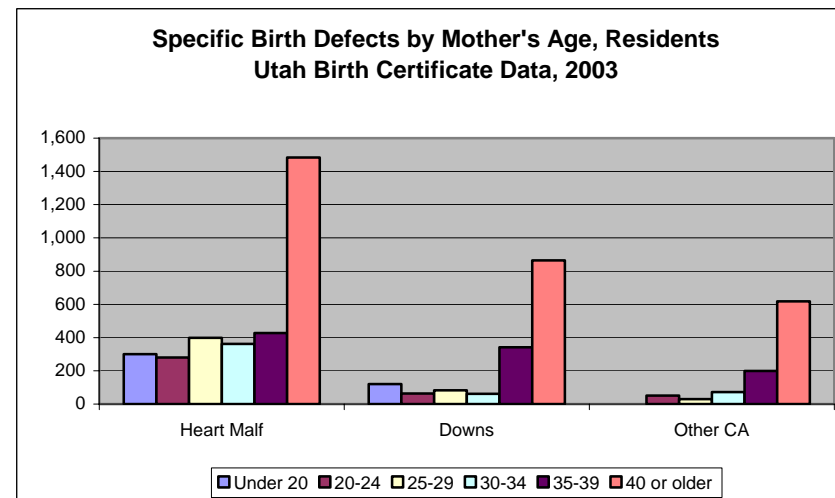


Figure 6

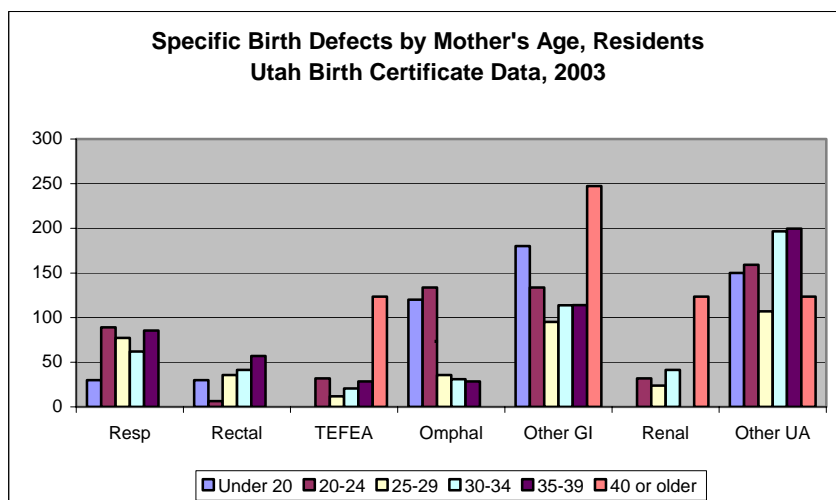
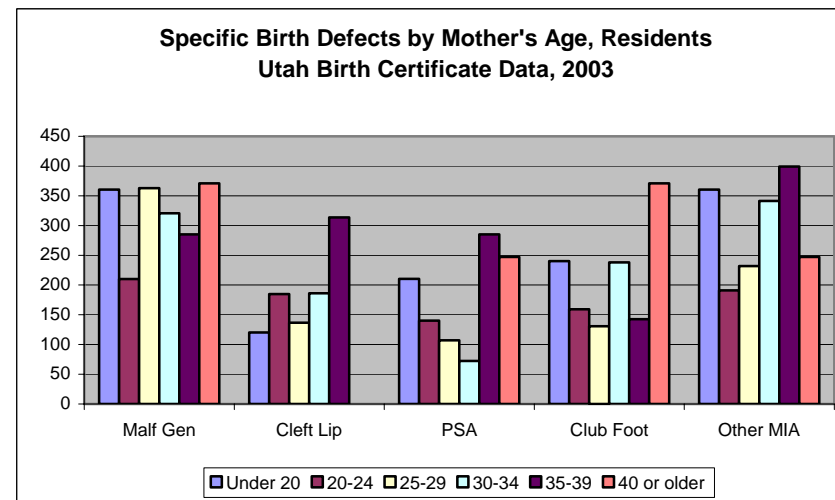


Figure 7



Chromosomal abnormalities, genetic disorders, and environmental insults can cause birth defects. However, the causes of about 60 to 70 percent of birth defects currently are unknown. Figure 3 shows that the majority of pregnancies in which a child has a birth defect are full term deliveries (37-40 weeks).

Figure 8

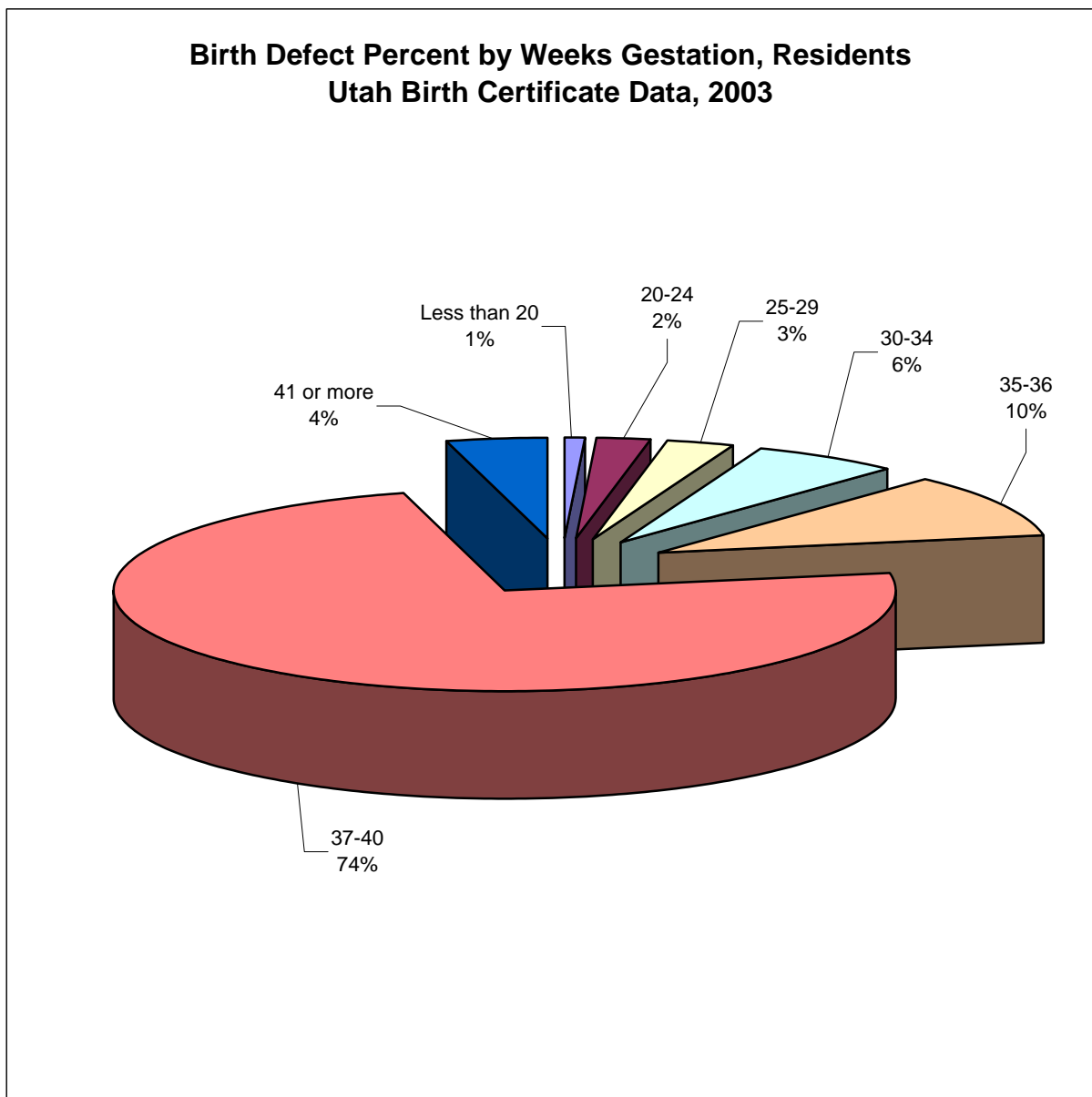
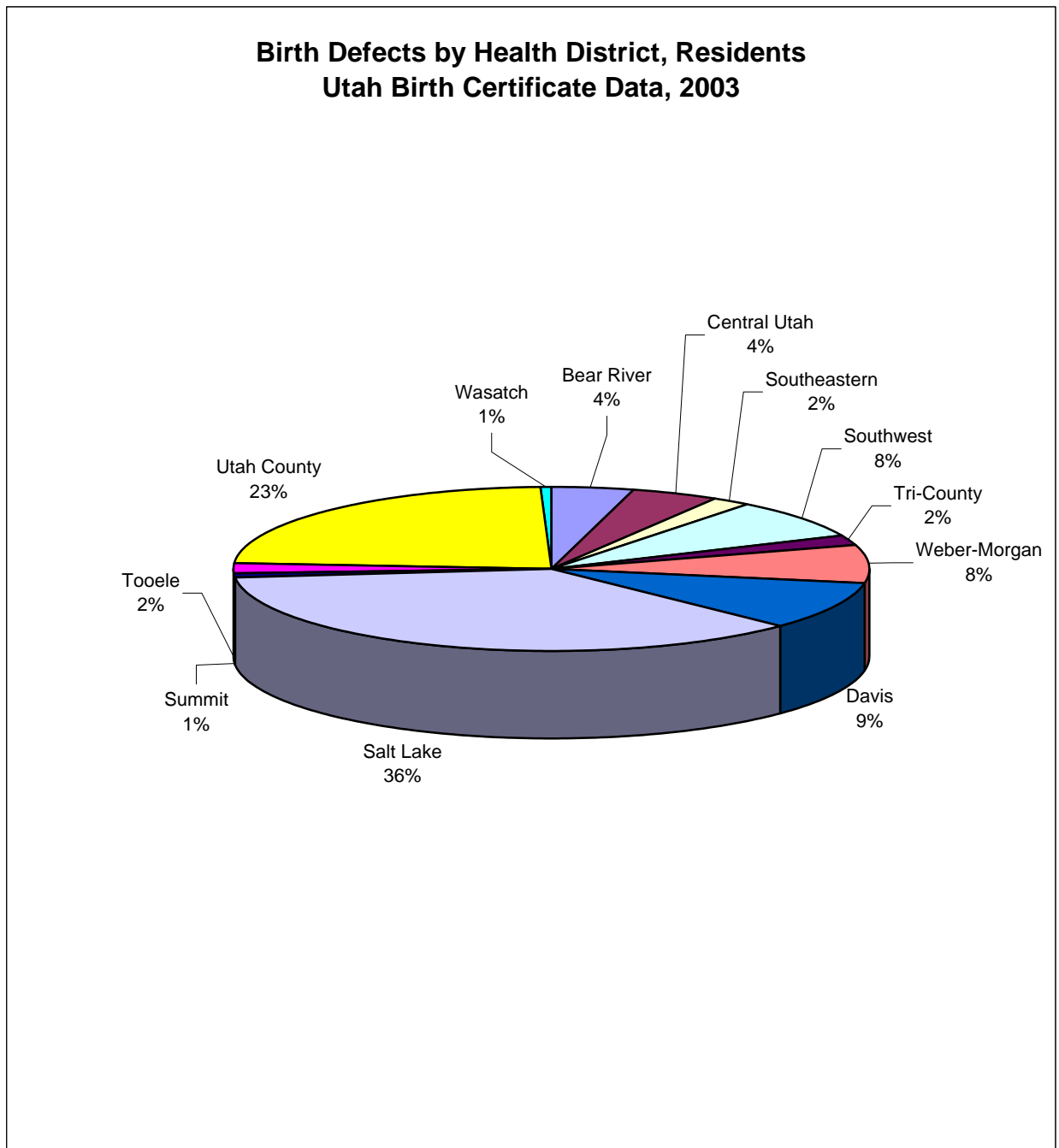


Figure 9



As seen in Figure 9, Salt Lake and Utah County Health Districts have the highest percentage of infants born with birth defects. This is similar to the distribution of live births.

Conclusion

Birth defects are the leading cause of infant mortality in the United States, accounting for more than 20 percent of all infant deaths. Approximately 120,000 U.S. babies are born each year with a birth defect and 8,000 will die during their first year of life. Approximately 25 percent of babies with birth defects are premature (less than 37 weeks gestation).

Birth defects can result from chromosomal abnormalities, genetic disorders, or environmental responses to drugs, chemicals or maternal conditions. However, in most cases there is no known reason for the birth defect. Epidemiologist study data from birth outcomes in order to identify possible causes for birth defects. Public health officials design preventive measures to reduce the number of birth defects to Utah residents.

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